



UNIVERSITY OF
CENTRAL
ARKANSAS™

UCA Research in STEM Education Seminar

SPEAKER: Dr. Andrew Mason
UCA Department of Physics and Astronomy

Title: Introductory Physics Considerations for
Different Life Science Majors

Date: Tuesday, October 3, 2017

Time: 1:40 – 2:30 p.m.

Place: MCS 115



ABSTRACT: One form of discipline-based STEM education researchers' interdisciplinary efforts is to consider introductory physics for life sciences (IPLS) course transformations. Current literature on successful course transformations, however, tends to feature courses created for a monolithic course population of life science majors at large research universities, e.g. uniformly biology majors on a pre-medical track, or a uniform set of pre-physical therapy track majors. College Physics 1 (PHYS 1410), an algebra-based introductory physics course at UCA, offers a potential counterexample of two sets of life science majors that dominate the course population: biology majors, who reside in the College of Natural Sciences and Mathematics, and health science majors, who reside in the College of Health and Behavioral Sciences. There is a potential for different motivations for learning within an introductory physics course. This talk describes the results of an experimental investigation into the difference between choice of life science majors as a potential variable for epistemic views towards learning physics problem solving and for course performance as a whole.

This talk will include featured work from Charles A. Bertram (Cabot High School; B.S. Physical Science, STEMteach Minor, University of Central Arkansas, Spring 2017).